Panasonic

TX–28MD3

TX–25MD3

TX–21MD3

(U.K. Standard)

Quintrix

Please read these instructions completely before use and retain them for future reference.

TQB8E2259–2

Dear Panasonic Customer,
Welcome to the Panasonic family of customers. We hope that you have many years of enjoyment from your new colour television. This is a very advanced television, however, the Quick Start Guide will tell you how to have the TV operating quickly; you can then read the following pages to fully utilise the advanced features.

This television has a low power consumption making it very cost effective to run.
To this end, the standby power consumption is merely 1 watt.

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WARNINGS and PRECAUTIONS

- This TV is designed to operate on A.C. 220 – 240V, 50Hz.
- This TV is capable of receiving the following transmission standard, PAL I.
- To prevent damage which might result in electric shock or fire, do not expose this TV set to rain or excessive moisture.
- **WARNING : HIGH VOLTAGE !!!**
  Do not remove the rear cover as live parts are accessible when it is removed. There are no user serviceable parts inside.
- Avoid exposing the TV set to direct sunlight and other sources of heat.
- Remove the mains plug from the wall socket when the TV set is not used for a prolonged period of time.
- **CABINET AND PICTURE TUBE CARE**
  Remove the mains plug from the wall socket. The cabinet and picture tube can be cleaned with a soft cloth moistened with mild detergent and water. Do not use solutions containing benzol or petroleum. TV sets can produce static electricity, care must be taken whenever touching the TV screen.
- Adequate ventilation is essential to prevent failure of electrical components. We recommend that a gap of at least 5cm is left all around this TV even when it is placed inside a cabinet or between shelves.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a fitted three pin mains plug for your safety and convenience. A 5 amp fuse is fitted in this plug. If the fuse is replaced then the replacement fuse must be 5 amp rated and should be approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the fitted plug has a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. Replacement fuse covers can be purchased through your local Panasonic dealer.

The plug fitted to this appliance incorporates a mains filter circuit. If this is removed or replaced with a non–filtered plug this television will no longer meet the European standards for Electromagnetic Compatibility (EMC). If the fitted plug is unsuitable for the socket outlet in your home an appropriate adapter should be used.

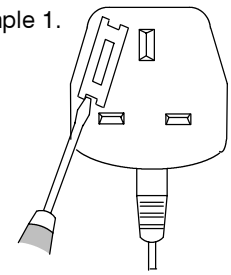
Nonetheless, if the fitted plug is replaced, the fuse should be taken out and the cut–off plug disposed of safely. There is danger of severe electrical shock if the cut off plug is inserted into any 13 amp socket.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

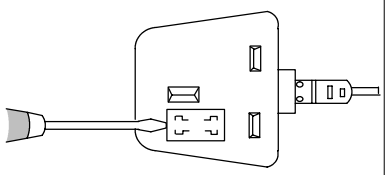
How to replace the fuse (for plug type shown in example 1) :
Lift out the removable fuse compartment with a screwdriver and replace the fuse, then refit securely into the mains plug (See example 1).

How to replace the fuse (for plug type shown in example 2) :
Lift open the fuse compartment, in the mains plug, with a screwdriver, and replace the fuse, then press the fuse cover down securely. (See example 2).

Example 1.



Example 2.



IMPORTANT :– The wires in the mains lead of this appliance are coloured in accordance with the following code :–

BLUE : NEUTRAL BROWN : LIVE

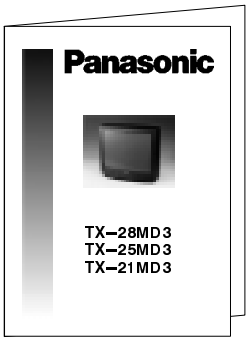
As the colours of the wires in the mains lead of this appliance may not correspond to the markings identifying the terminals in your plug, proceed as follows :–

1. The BLUE wire must be connected to the terminal marked 'N' or coloured black.
2. The BROWN wire must be connected to the terminal marked 'L' or coloured red.

IMPORTANT NOTE : Under no circumstances should either of these wires be connected to the Earth terminal of the three pin plug, marked with the letter 'E' or the earth symbol.

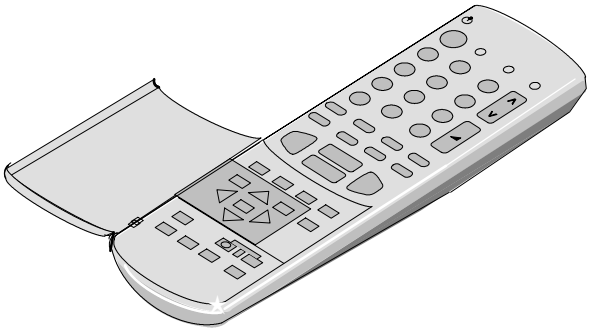
ACCESSORIES

Check that you have the accessories and items shown



Operating Instruction book

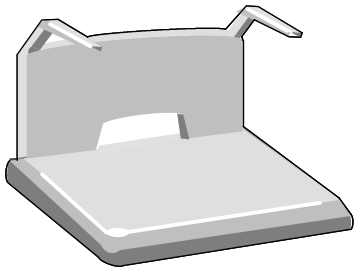
TV Guarantee



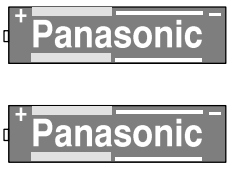
Remote Control Transmitter (EUR51920)

Questionnaire

CRT Guarantee

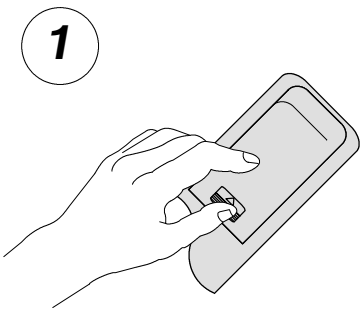


TV Stand TS–2800S
(Assembly Instructions are included in stand packaging)

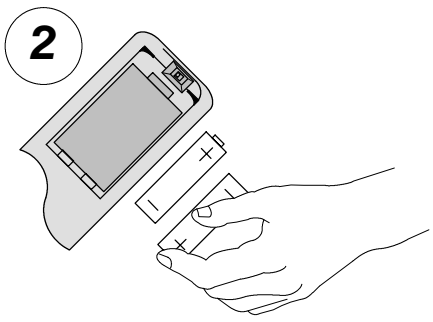


Batteries for the Remote Control Transmitter.
(2 x R6 (UM3) size)

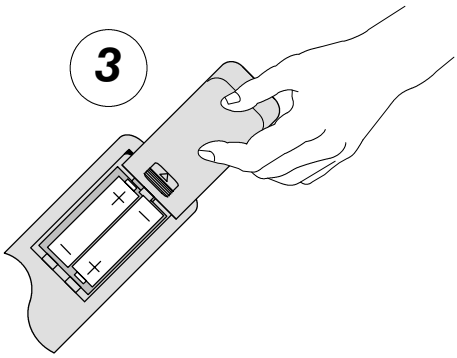
FITTING REMOTE CONTROL BATTERIES



Slide off the battery cover



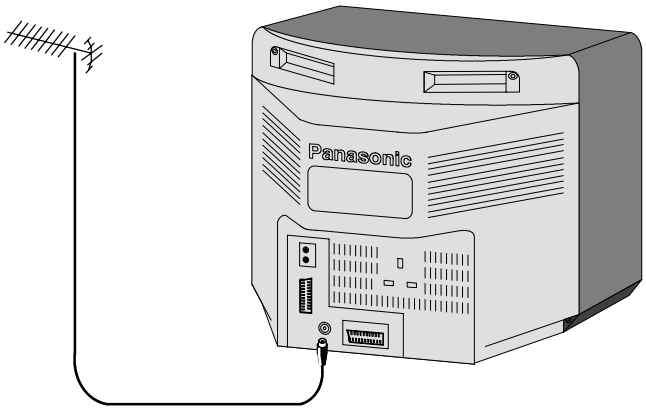
Insert batteries – note correct polarity



Replace the cover

Notes:
- Make sure that the batteries are fitted the correct way round.
- Do not mix old batteries with new batteries. Remove old, exhausted batteries immediately.
- Do not mix different battery types, i.e. Alkaline and Manganese. Do not use rechargeable (Ni–Cad) batteries.

1 . 2 . 3 . . . . .



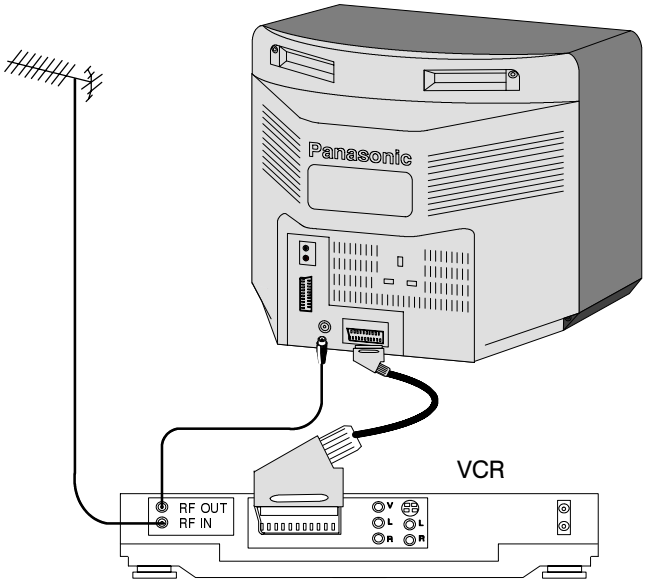
1

TV only

Connect Aerial co−axial cable direct to TV RF IN socket.

OR

USING A VCR



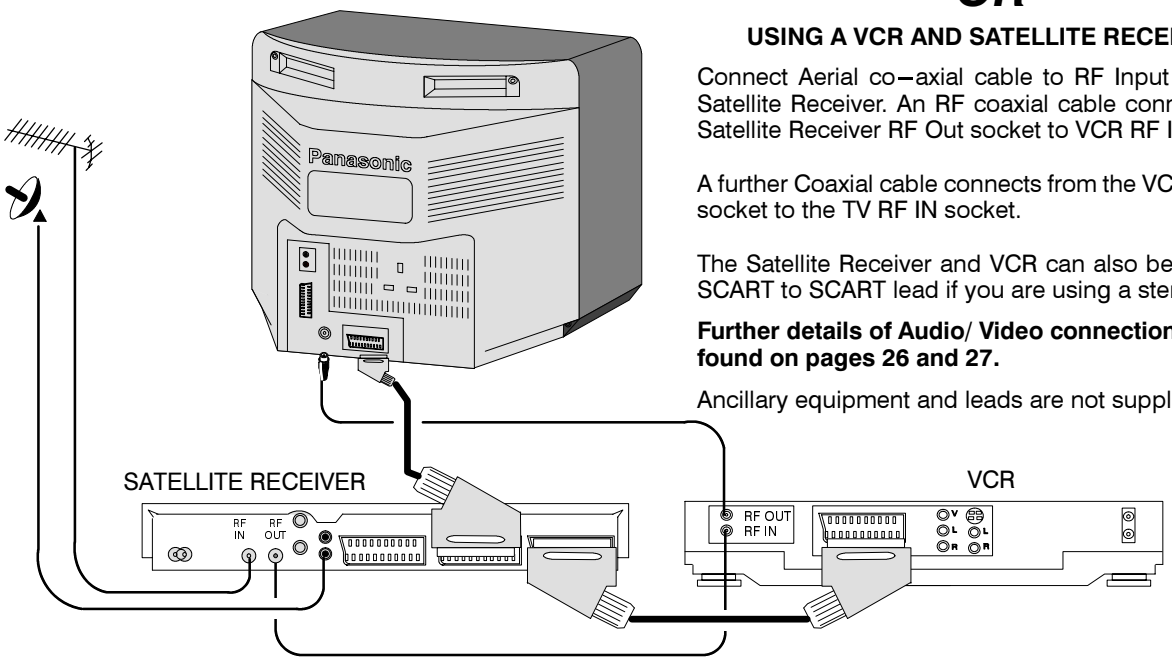
Connect Aerial co−axial cable to RF Input socket of VCR and a RF coaxial cable from VCR RF Out socket to TV RF IN socket.

The VCR can also be connected to the TV using a SCART to SCART lead if you are using a stereo VCR. Use the AV1 21 pin terminal for a VCR. To connect an S−Video VCR use the AV2S 21 pin terminal.

Further information for VCR and Satellite Receiver installation with this TV can be found on page 24 .

OR

USING A VCR AND SATELLITE RECEIVER



Connect Aerial co−axial cable to RF Input socket of Satellite Receiver. An RF coaxial cable connects from Satellite Receiver RF Out socket to VCR RF IN socket.

A further Coaxial cable connects from the VCR RF OUT socket to the TV RF IN socket.

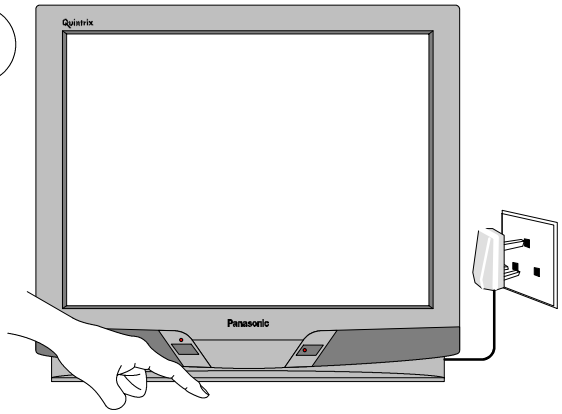
The Satellite Receiver and VCR can also be linked by SCART to SCART lead if you are using a stereo VCR.

Further details of Audio/ Video connections can be found on pages 26 and 27.

Ancillary equipment and leads are not supplied.

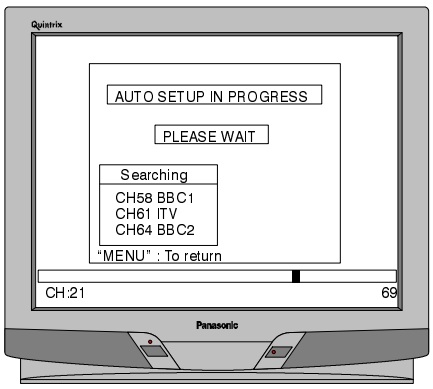
QUICK START GUIDE

2



Switch ON your VCR *[1].
Switch ON your Satellite Receiver*[2].
Plug the TV into mains socket and switch on.

3

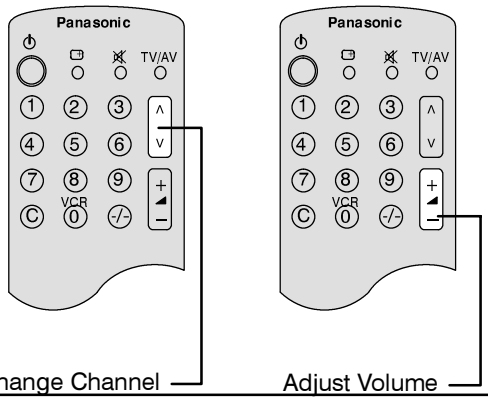


Programmes will appear immediately if your dealer has programmed the TV for you.

If the TV has not been programmed for you then **Auto setup** will begin. TV stations will be located, sorted into order and stored ready for use*[3].

Switch the VCR Test Signal 'off'*[4].

. . . READY TO GO!



*1 We recommend that you have the VCR's test signal 'on' – refer to your VCR instruction book to locate the VCR Test Signal switch (usually on the rear of the VCR).

*2 The Satellite Receiver must be tuned to either SKY ONE or SKY NEWS before starting Auto Setup. When Auto Setup has finished, the satellite position that has been stored will be listed as 'SAT'.

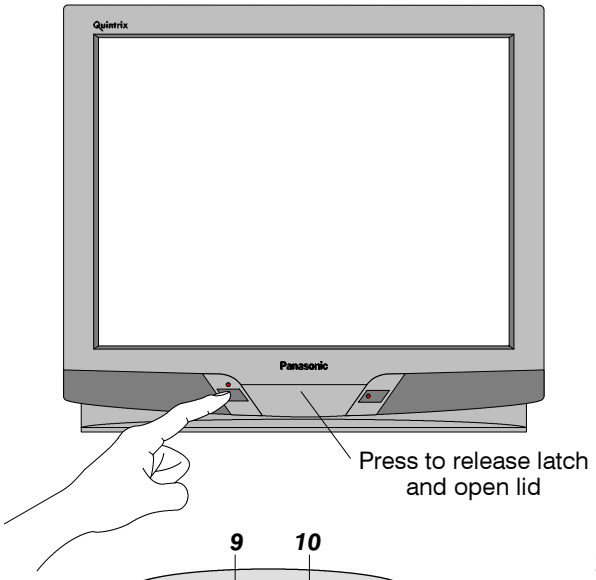
*3 The sorting order depends upon the TV signal, the broadcasting system, and reception conditions. If the order is not to your preference it can be rearranged. Refer to the Programme Edit menu – see page 17 for details.

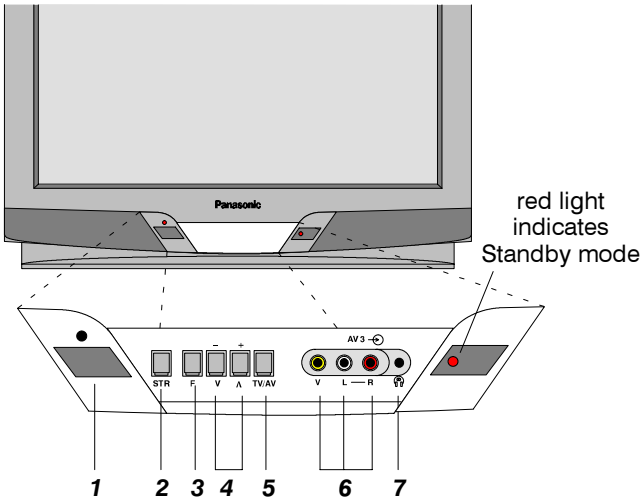
Programme Position	All stations available	No CH5	No CH5 / S4C	No CH4 / CH5	No S4C	No CH4 / S4C	No CH4 / S4C / CH5
1	BBC1	BBC1	BBC1	BBC1	BBC1	BBC1	BBC1
2	BBC2	BBC2	BBC2	BBC2	BBC2	BBC2	BBC2
3	ITV	ITV	ITV	ITV	ITV	ITV	ITV
4	CH4	CH4	CH4	S4C	CH4	◒	◒
5	S4C	S4C	SAT	SAT	CH5	CH5	SAT
6	CH5	SAT	◒	◒	SAT	SAT	◒
7	SAT	◒	◒	◒	◒	◒	◒

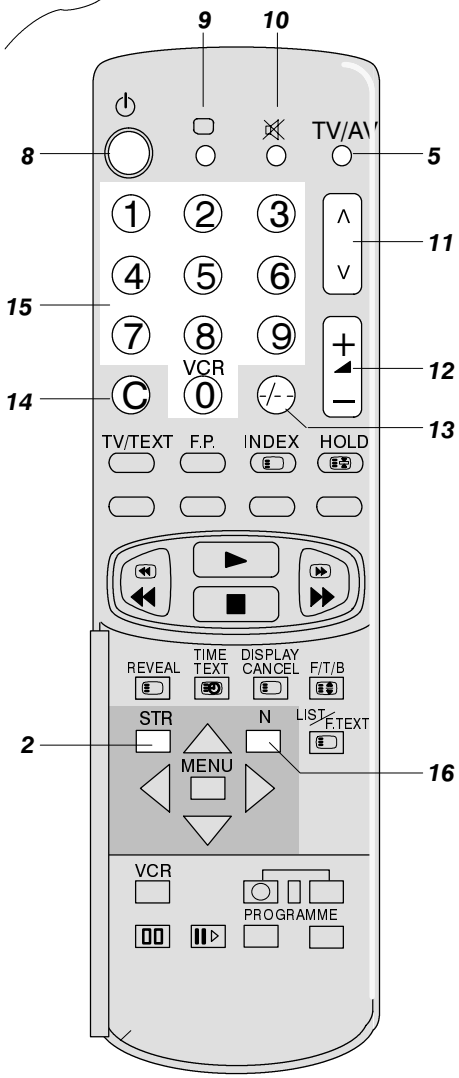
Note :
◒ The next available channel will appear, if no other stations are available then the Programme position will remain unused.

*4 If your VCR Test Signal appears as a programme position it can be deleted using the Programme Edit menu.

IT IS IMPORTANT THAT you use only programme position '0' for your VCR. If your VCR does not appear to operate on programme position '0' (the VCR position), refer to page 24 for guidance.







1 **Mains On/Off** switch

2 **Normalisation Store (STR)** adjust the Volume, Contrast, Brightness, Colour, Sharpness, Tint (in M.NTSC / NTSC), Bass, Treble and Balance, to your normal settings. Press STR when either the Main or Sound menus are displayed to store them in memory (see note 16 below).

3 **Function select (F)** Displays the on screen functions. Press repeatedly to select from the available functions of Volume, Contrast, Brightness, Colour, Sharpness, Bass, Treble and Tuning mode (see note below).

4 – / + /∧ /∨ Increases or decreases the channel settings. If a function is displayed you can adjust the level.

5 **TV/AV** switches between TV and Audio/Video operations.

6 **RCA Audio/Video sockets** for the connection of Audio/Video equipment, e.g. VCR.

7 **Headphone socket** for connection of stereo headphones with 3.5mm plug.

8 **Standby to switch** TV on or off Standby mode. Set can also be switched on from Standby by pressing a 0–9 programme button or by pressing – / + /∧ /∨ on the front control panel. **NOTE:** TV cannot be switched on using the Mains On/Off switch if it is in Standby mode.

9 **Status** displays the Programme position, name and channel number also the time and Teletext system (if available) and Audio Systems. Whilst in Status mode press ◀ ▶ to display Programme / Channel table 1 to 31 plus VCR, 32 to 63, 64 to 95 and again for 96 to 99.

10 **Sound Mute** to instantly mute or restore sound. Screen will display **'Mute'** if in use.

11 **Programme Up/Down** to increase or decrease programme position.

12 + / – Increases or decreases the **Volume.**

13 **Programme position** to select programme positions from 10–99.

14 **Direct channel access** allows direct access to local channels via the 0–9 keys.

15 **0–9** to select programme numbers or Teletext pages.

16 **Normalisation (N)** to recall the levels previously set with the store (STR) key.

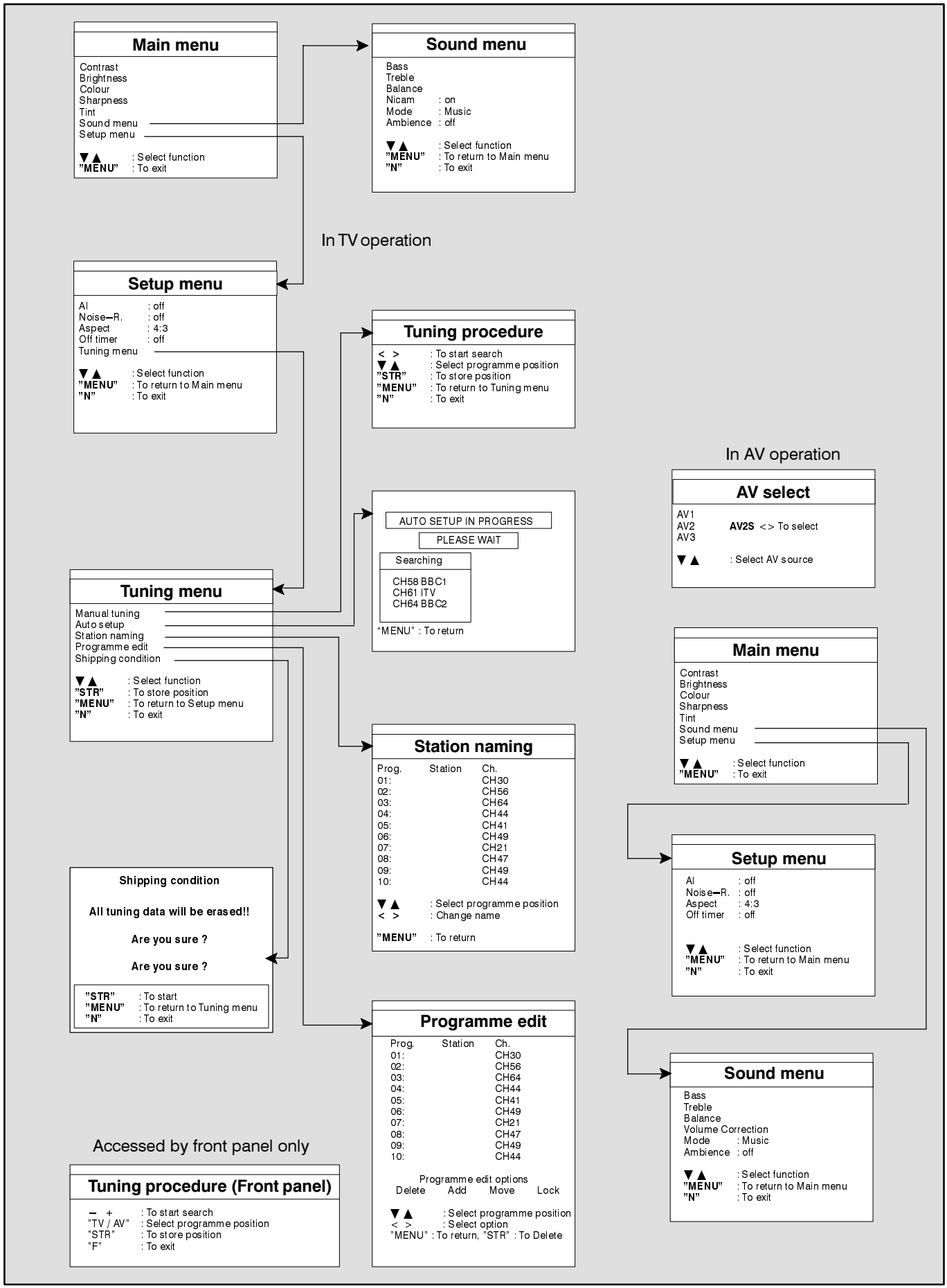
Although you will normally use tuning methods provided by the tuning menus that appear later in this book, it is possible to operate basic tuning control by repeatedly pressing the **'F'** key on the front panel until the **Tuning mode** is reached. Pressing the front panel – or + keys will lead to the **Tuning procedure** menu. Following the on screen instructions will allow you to tune and save any programme positions.

Tuning procedure (Front panel)

– +	: To start search
"TV / AV"	: Select programme position
"STR"	: To store position
"F"	: To exit

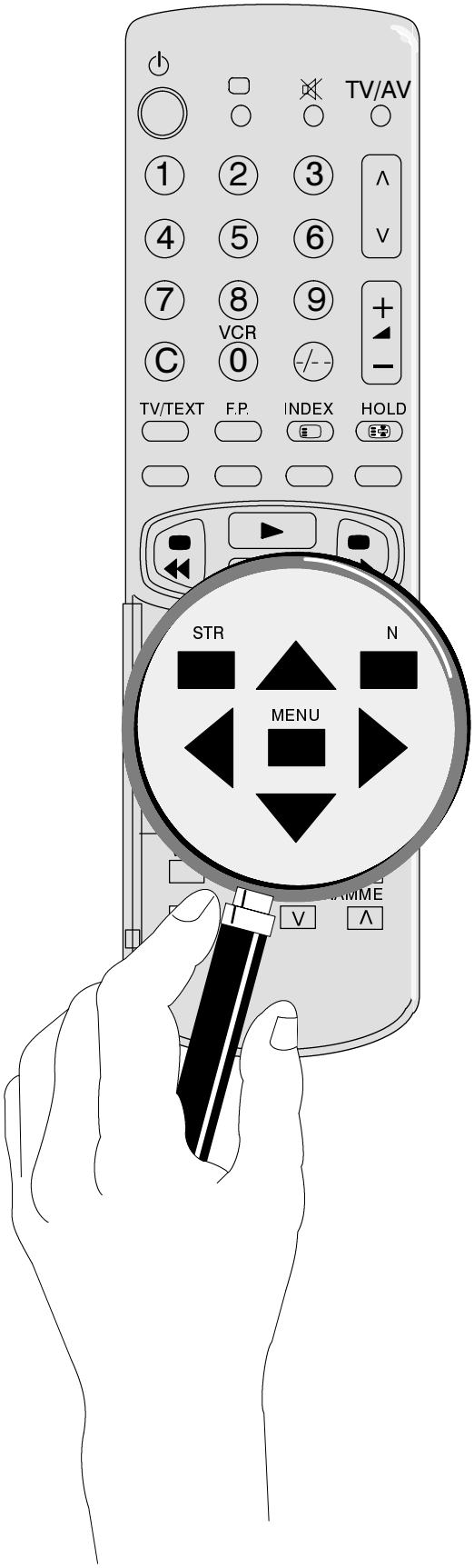
ON SCREEN DISPLAY MENUS

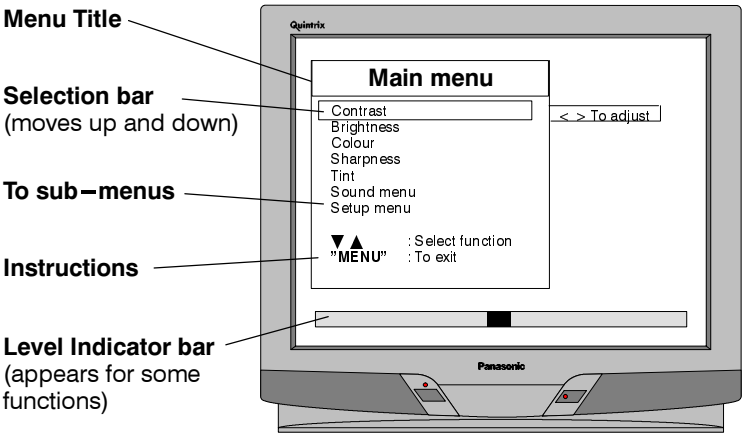
The advanced features of this television are controlled by using on–screen menus. These are contained in the menu structure starting from the Main menu as shown below.



ON SCREEN DISPLAY MENUS

This TV has a comprehensive system of On Screen Display menus to access adjustments and options.
All menus (except AV select) start from the Main menu. If you follow the on screen instructions you will be able to move to further menus. The menu structure is shown on the previous page.

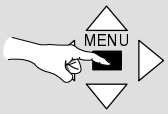




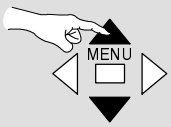
The following remote control keys can be used to access and adjust settings from the On Screen Display menus.

Some selections, for example, **Contrast, Brightness, Colour** and **Sharpness** will display a coloured adjustment bar.

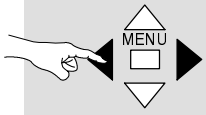
Some selections, for example, **Mode**, allow a choice to be made.



The **'MENU'** key is used to open the **Main** menu and also to return to either the **Main** menu or a previous menu.



The ▲▼ keys are used to move the selector up and down the menu.



The ◀▶ keys are used to access your selected function and either adjust levels or to make a choice.

The **'STR'** key is used to store settings after your adjustment or choice has been made.

The **'N'** key is used to leave the menu system and return to the normal viewing screen.

MAIN MENU

Notes :
The levels of **Contrast, Brightness, Colour, Sharpness** and **Tint** are adjusted by using the coloured bar, that will appear on selection, as a guide. **Tint** function will only appear on the **Main** menu if M.NTSC or NTSC inputs are connected.

Pressing **STR** (whilst in either the **Main** or **Sound** menus) after making adjustments to the Contrast, Brightness, Colour, Sharpness, (Tint in M.NTSC / NTSC), Volume, Bass and/or Treble will store these adjustments in memory as your normal settings. Pressing the **N** button at any time will restore the TV to these settings.

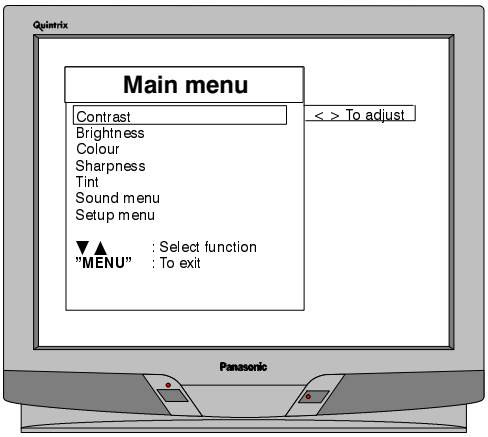
The coloured adjuster bars will disappear after a short time if no adjustment is made.

If **Sound** or **Setup** menus are selected then they will lead to further menus as detailed on pages 11 and 12.

1

MENU

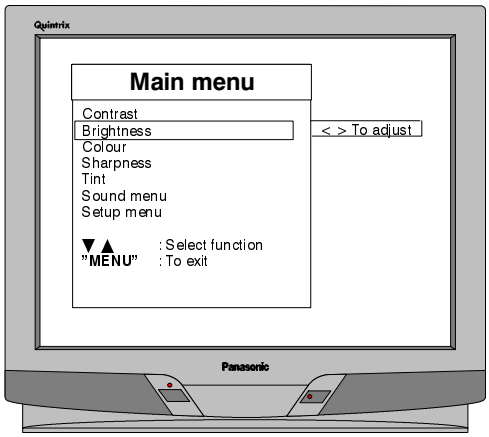
To open Main menu



2

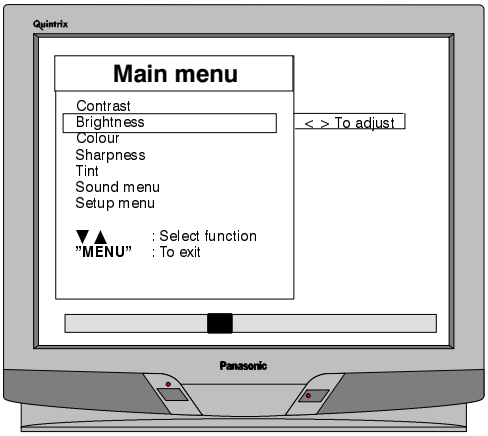
▼ ▲ To move selector up or down to the function that you wish to access

◀ ▶ To access your choice



3

◀ ▶ To increase or decrease level using colour bar as guide or to access Sound or Setup menus



4

MENU

To return to viewing screen

Notes :
Bass – adjusts the bass response.

Treble – adjusts the treble response.

Balance – adjusts the sound output levels between the left and right channels.

Volume Correction – (in AV mode only) allows different volume levels to be set for TV and AV signals.

NICAM – Select either **NICAM : on** for stereo sound reproduction
or **NICAM : off** for FM Mono sound output.
If **NICAM Mono** is being transmitted select either FM Mono, NICAM Mono I (M1) or NICAM Mono II (M2)**.** The outputs depend upon the signal being transmitted. It is advisable to switch to FM Mono if reception deteriorates. When NICAM transmissions are not being received the sound will be FM Mono only.

Mode – the sound quality can be set to Music or Speech, as required, by selecting the appropriate choice.

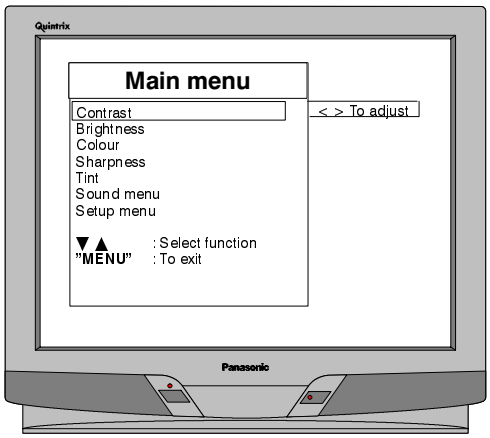
Ambience – a dynamic sound enhancer that gives a feeling of greater acoustic presence.

Pressing **STR** (whilst in either the **Main** or **Sound** menus) after making adjustments to the Volume, Bass, Treble, Contrast, Brightness, Colour, Sharpness and/or (Tint in M.NTSC / NTSC), will store these adjustments in memory as your normal settings. Pressing the **N** button at any time will restore the TV to these settings.

1

MENU

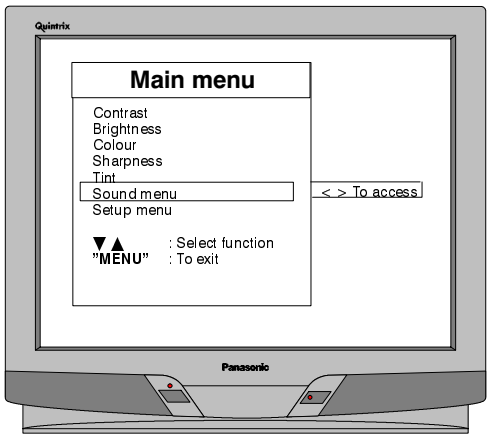
Press to open **Main** menu



2

▼ ▲ To move selector to the **Sound** menu

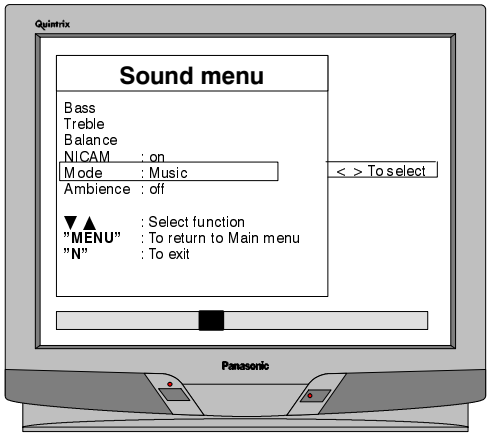
◀ ▶ To access Sound menu



3

▼ ▲ To move to required function

◀ ▶ To increase or decrease level using colour bar as guide or to choose from options



4

MENU

OR

N

To return to **Main** menu

'N' to return to viewing screen

SETUP MENU

Notes :
A.I. (Artificial Intelligence) allows the TV to automatically analyze the incoming picture and process it to give the best contrast, optimum field of depth and vivid colour tones.

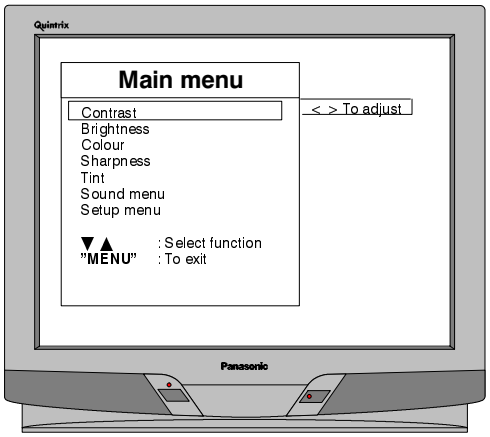
Noise–R (Picture Noise Reduction) automatically reduces unwanted picture interference.

Aspect (Picture Format) select 16:9 if receiving a 16:9 format signal through the AV1 21 pin terminals. Select 4:3 for normal picture format.

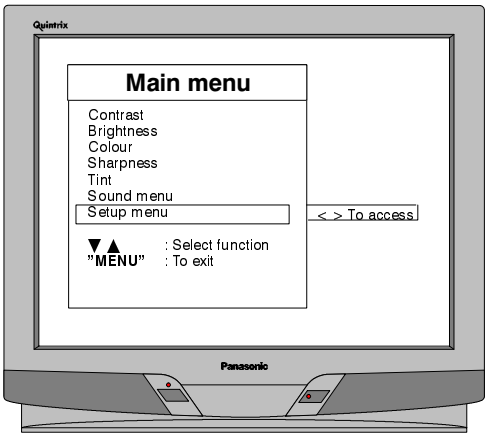
Off Timer allows you to select either 30, 60 or 90 minutes time before TV switches off to Standby mode.

Tuning menu allows access to the tuning menu detailed on next page.

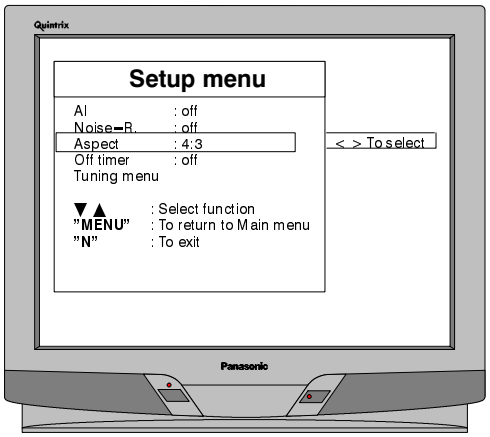
1 MENU Press to open **Main** menu



2 ▼ ▲ To move to **Setup** menu
◀ ▶ To access **Setup** menu



3 ▼ ▲ To move to required function
◀ ▶ To access options or **Tuning** menu



4 **OR** MENU To return to **Main** menu
N 'N' to return to viewing screen

Notes :
This TV will either have been programmed by your dealer ready for use or it will have automatically tuned itself to your local stations when it was installed.

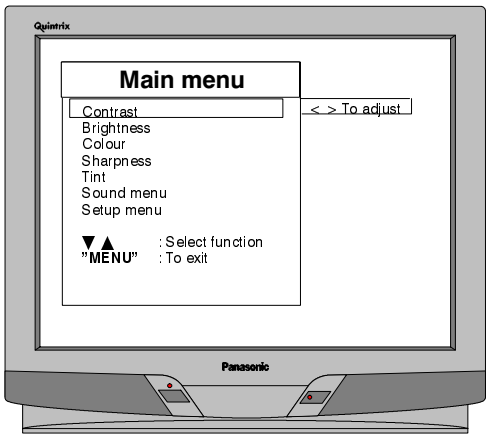
However, there may be circumstances when you want to either re–initialise the auto tuning or to tune in known stations manually.

Both methods, **Auto setup and Manual Tuning**, as well as **Station naming** and **Programme edit** are accessed through the **Tuning** menu.

1

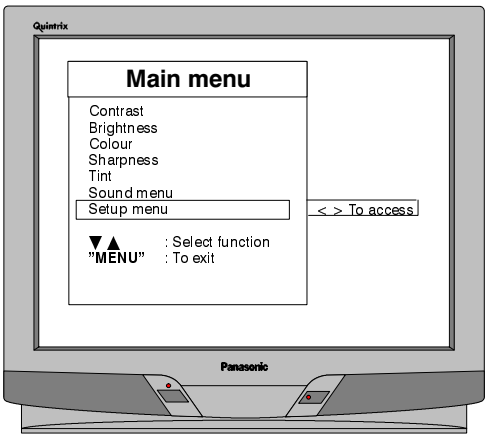
MENU

Press to open **Main** menu



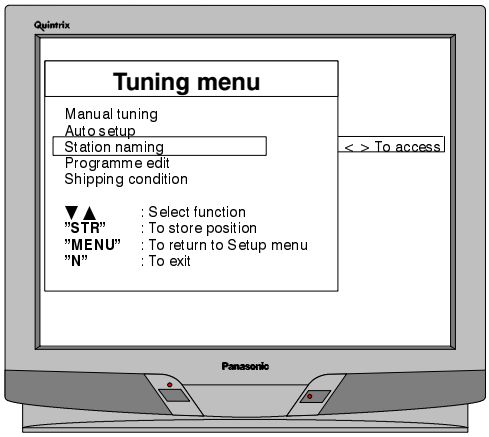
2

▼ ▲ To move to **Setup** menu
◀ ▶ To access **Setup** menu
▼ ▲ To move to **Tuning** menu
◀ ▶ To access **Tuning** menu



3

▼ ▲ To select function
◀ ▶ To access the required function



4

Proceed to your choice ;

Manual Tuning is described on page 14.

Auto Setup is described on page 15.

Station Naming is described on page 16.

Programme Edit menu is described on page 17.

MANUAL TUNING

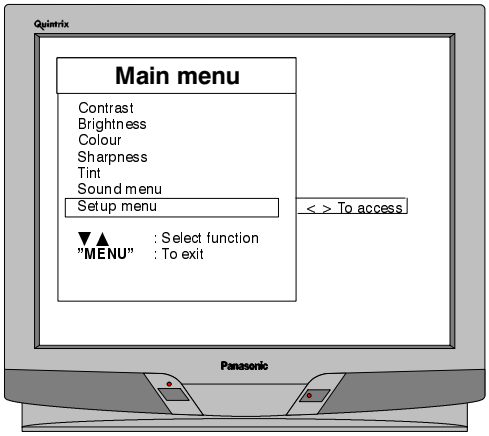
Notes :
The required channels can be manually stored by either searching for the required channel using the on screen display or by keying in the channel number if known.

IT IS IMPORTANT that you only use TV programme position '0' to view your VCR. If your VCR picture does not appear on programme position '0' (the VCR position), refer to page 24 for guidance.

1

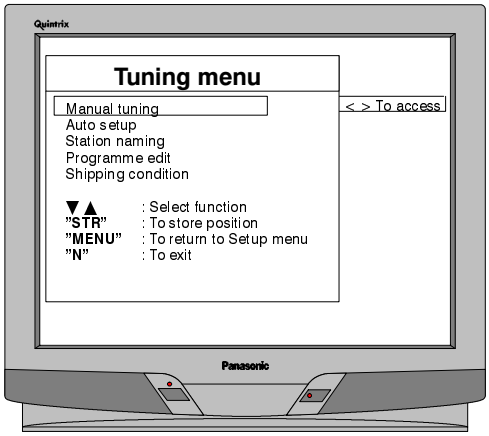
MENU
To open **Main** menu

▼ ▲ To move to **Setup** menu



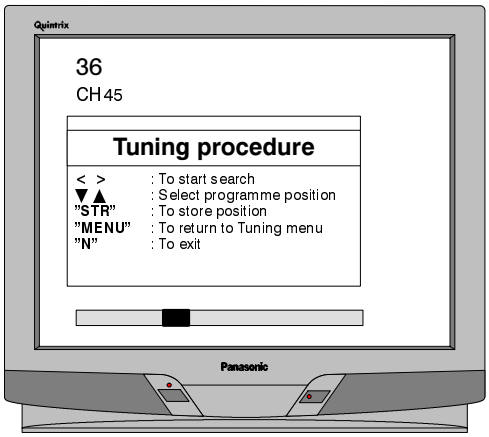
2

◀ ▶ To access **Setup** menu
▼ ▲ To move to **Tuning** menu
◀ ▶ To access **Tuning** menu
▼ ▲ To move to **Manual** tuning menu
◀ ▶ To access **Manual** tuning



3

◀ ▶ To start search
▼ ▲ To choose required programme position
Programme position and current channel are displayed top left of screen



STR
To store position

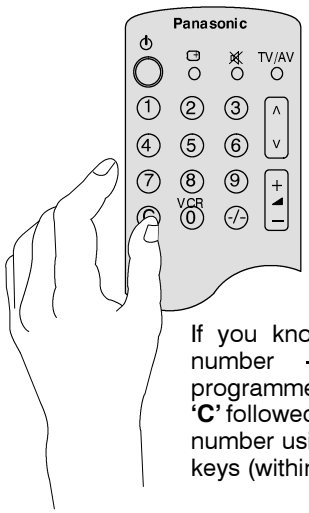
MENU
To return to **Tuning** menu

OR

N
To return to viewing screen

OR

4



If you know the channel number – select the programme position. Press **'C'** followed by the channel number using the numeric keys (within 6 seconds).

STR
To store position

MENU
To return to **Tuning** menu

OR

N
To return to viewing screen

Notes :
Your dealer may have programmed the TV ready for use. If this has not been done then the **Auto setup** menu will have run automatically the first time that you switched the TV on. Under normal circumstances there will be no need to access this menu. However, if, for example, you move to a different area then you will probably want the TV to tune itself to your new local stations.

This can be done either through the **Auto setup** menu or through the **Shipping Condition** menu. Details of **Shipping condition** menu appear on page 19.

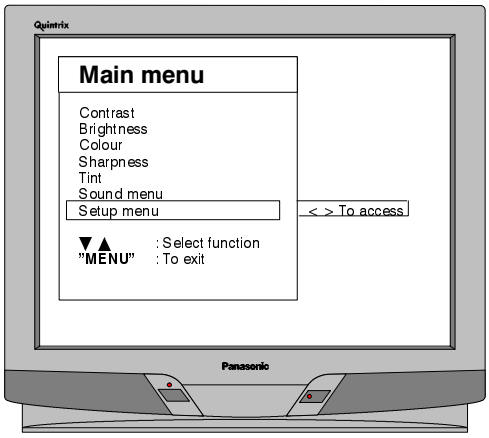
It is possible, especially in areas where you are able to receive more than one transmitter, that you may prefer to rearrange the order of the selection of stations. This can be achieved through the **Programme edit** menu, as detailed on pages 17 and 18.

1

MENU
Press to open **Main** menu

▼ ▲ To move to **Setup** menu

◀ ▶ To access **Setup** menu



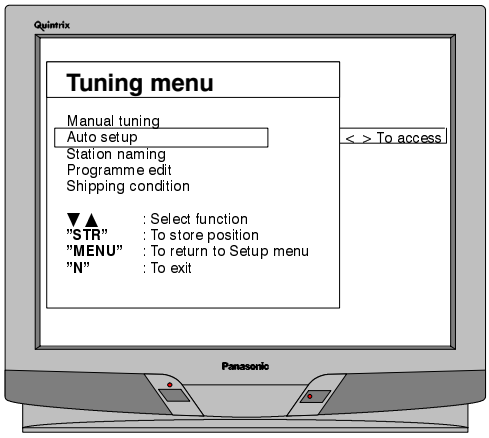
2

▼ ▲ To move to **Tuning** menu

◀ ▶ To access **Tuning** menu

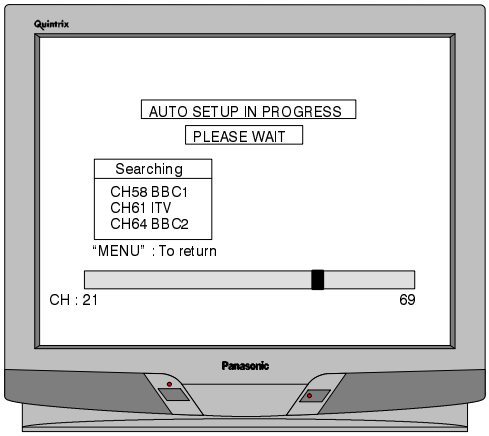
▼ ▲ To move to **Auto setup** menu

◀ ▶ To start **Auto setup**



3

Auto setup tuning will begin, stations will be located, sorted and stored ready for use



4

MENU
To stop **Auto Setup** at any time

STATION NAMING

Notes :
Each channel may be given an individual name so that you can remember the channels by name as well as programme number. For example you could rename **'BBC–1'** to '**ONE**' if you wished.

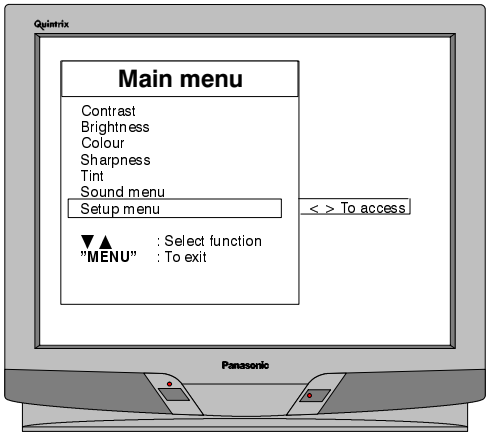
1

MENU

Press to open **Main** menu

▼ ▲ To move to **Setup** menu

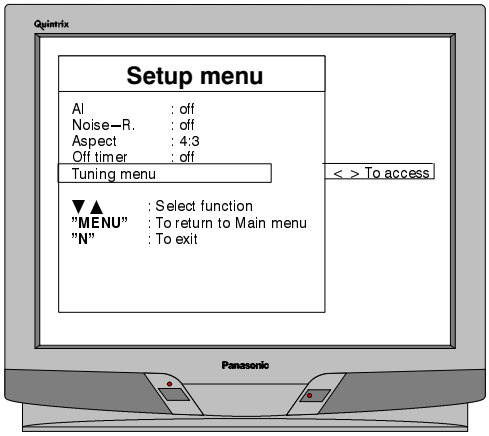
◀ ▶ To access **Setup** menu



2

▼ ▲ To move to **Tuning** menu

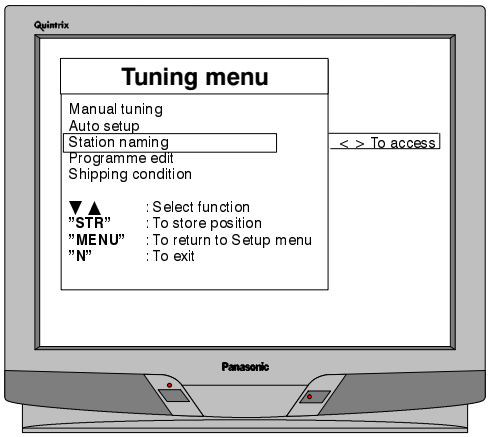
◀ ▶ To access **Tuning** menu



3

▼ ▲ To move **Station naming** menu

◀ ▶ To access **Station naming** menu



4

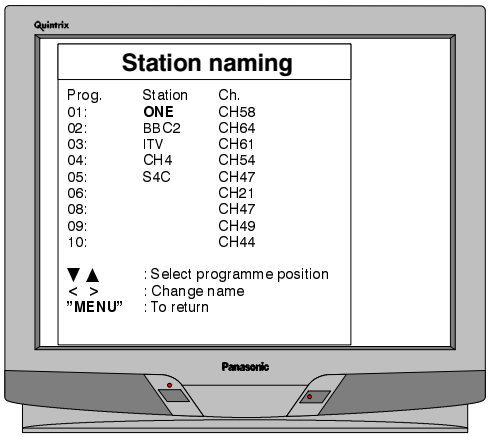
▼ ▲ To move to desired programme

◀ ▶ To change name

▼ ▲ To select desired character

◀ ▶ To move to desired character position

Repeat previous two steps until renaming is completed



STR

To store new name

MENU

To return to **Tuning** menu

OR

N

To return to viewing screen

Notes :
The named programme positions can be moved to another place in the programme order or deleted from the order. New programmes can be added to the order. Programmes positions can also be locked to prevent access.

Access to programme position '0'–VCR is prevented in this menu.

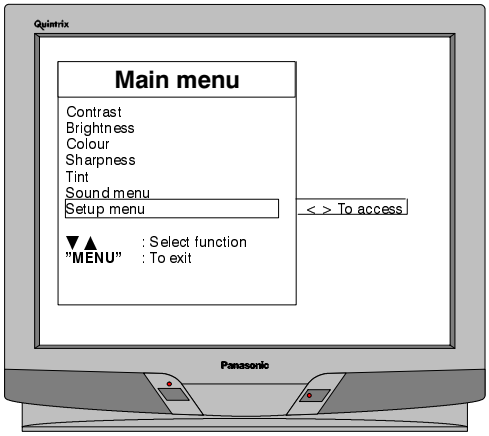
1

MENU

Press to open **Main** menu

▼ ▲ To move to **Setup** menu

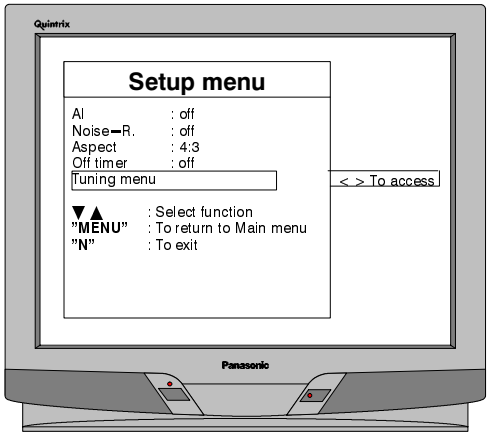
◄ ► To access **Setup** menu



2

▼ ▲ To move to **Tuning** menu

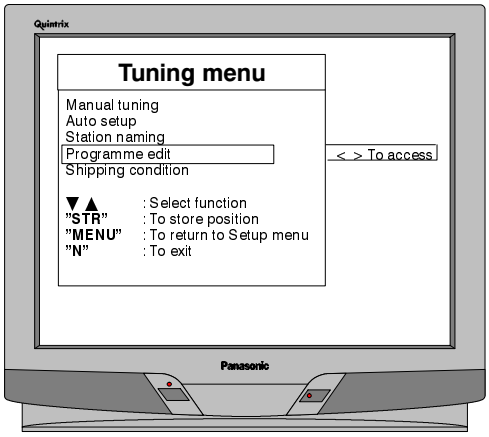
◄ ► To access **Tuning** menu



3

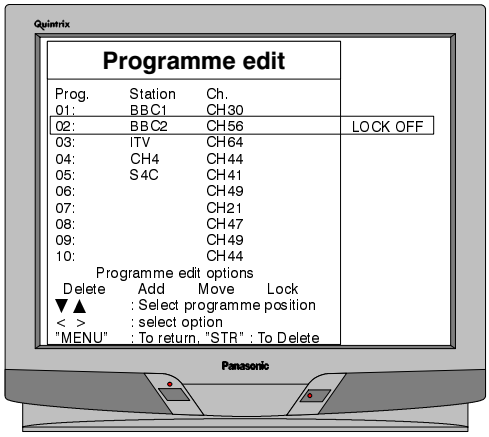
▼ ▲ To move **Programme edit** menu

◄ ► To access **Programme edit** menu



4

▼ ▲ To select the desired programme position. Programme position '0' is reserved for VCR operation.



Continue to options 5,6,7 or 8

PROGRAMME EDIT

Notes :

Option 5 allows station names and channels to be **deleted**

Option 6 allows new programmes and channels to be **added**

Option 7 allows programme positions to be **moved**

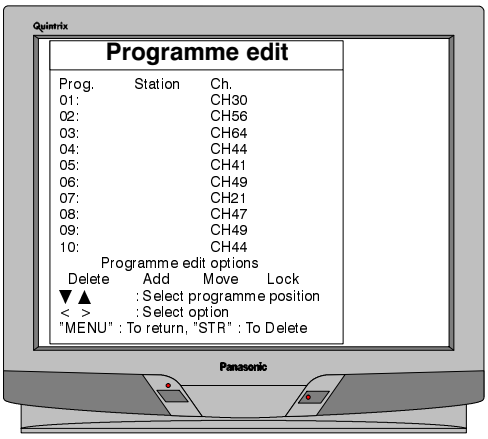
Option 8 allows programme positions to be **locked**

5

◀ ▶ To select **Delete**

STR

Press twice to delete selected station and channel



N

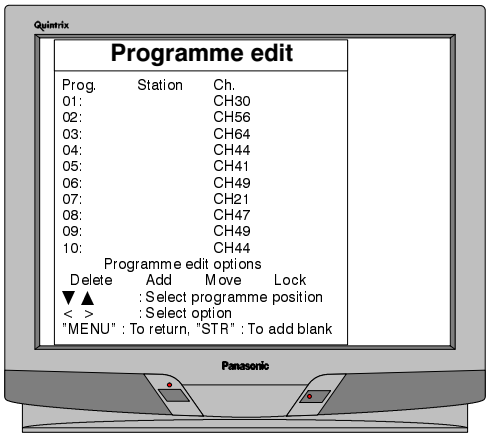
To return to normal TV operation.

6

◀ ▶ To select **Add**

STR

Press twice to insert a blank channel in the current programme position.



N

To return to normal TV operation.

The channel can then be tuned as described under Manual tuning on Page 14.

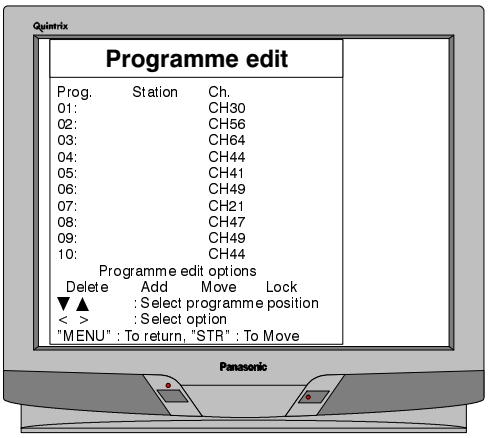
7

◀ ▶ To select **Move**

STR

To move

▼ ▲ To select the new programme position for the current channel



STR

To end move operation.

N

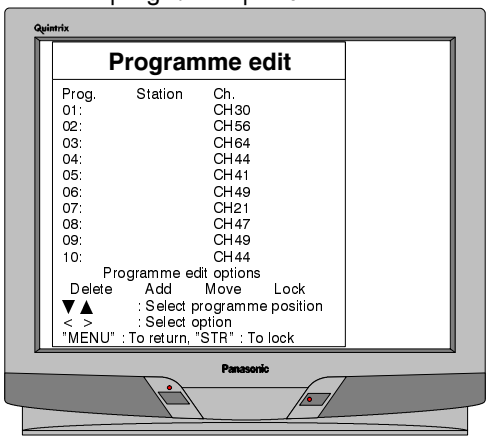
To return to normal TV operation.

8

◀ ▶ To select **Lock**

STR

To lock or unlock the current programme position.



N

To return to normal TV operation.

Notes :
Your dealer may have programmed the TV ready for use. If this has not been done then the **Auto setup** menu runs automatically the first time that you switch the TV on. Under normal circumstances there will be no need to access this menu. However, if for example, you move to a different area then you will probably want the TV to tune itself to your new local stations.

This can be done either through the **Shipping Condition** menu or through the **Auto setup** menu.

The **Shipping condition** menu will reset all data, clearing all tuning information and resetting all control levels back to factory settings. You may need to adjust your VCR or programme position '0' VCR after operating the **Shipping Condition** menu, refer to page 24.

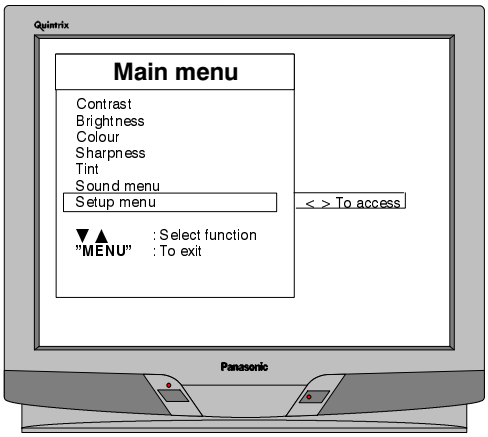
It is possible, especially in areas where you are able to receive more than one transmitter, that you may prefer to rearrange the order of the selection of stations. This can be achieved through the **Programme edit** menu, as detailed on pages 17 and 18.

1

MENU Press to open **Main** menu

▼ ▲ To move to **Setup** menu

◀ ▶ To access **Setup** menu



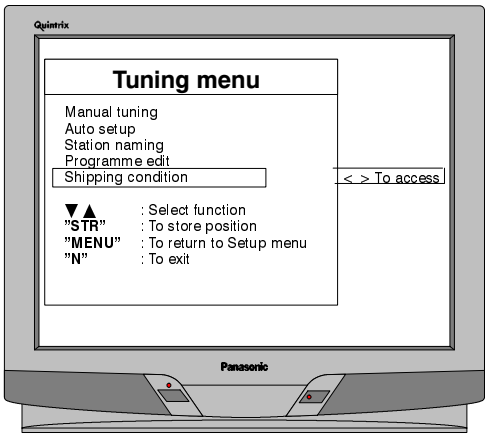
2

▼ ▲ To move to **Tuning** menu

◀ ▶ To access **Tuning** menu

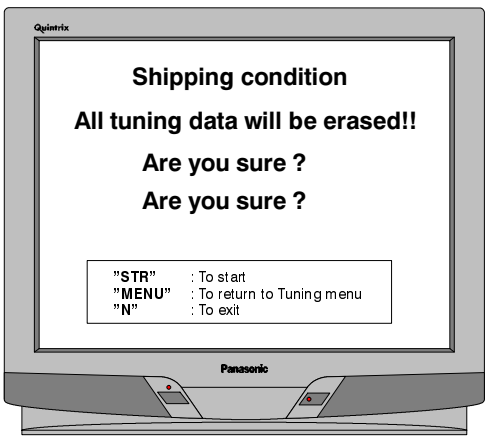
▼ ▲ To select **Shipping condition**

◀ ▶ To access **Shipping condition**



3

STR To start **Shipping condition**.
Press again, to confirm, when you are asked, "Are you sure?"

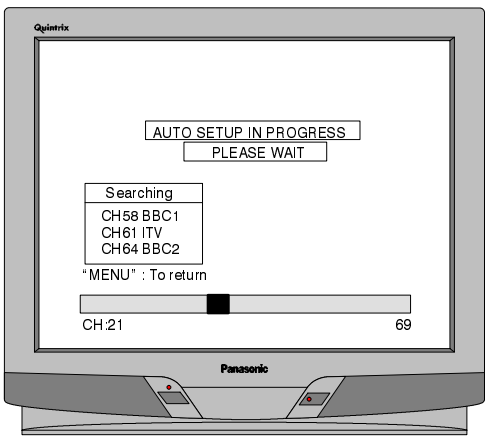


Wait for Tuning menu to reappear

4

◀ ▶ To start **Auto setup**

Auto setup tuning will begin, stations will be located, sorted and stored ready for use.



AV SELECT and SETUP

Notes :
Some items of Audio/Visual equipment will automatically switch AV1 and AV2 into AV mode – the screen will display EC1 or EC2.

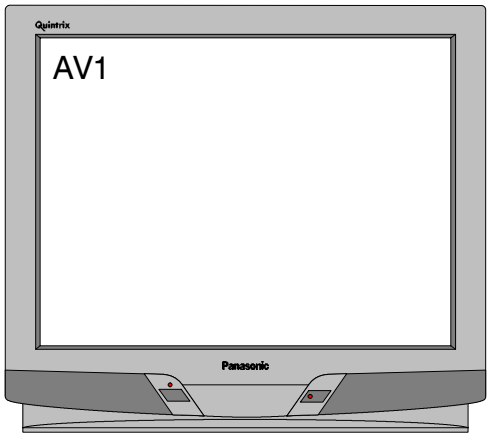
AV2S is suitable for S–Video cassette recorders or camcorders.

NTSC is the United States colour broadcast system (also used in some other countries). If you are using the AV function to replay an NTSC recording from a VCR the TV will automatically recognise the signal.

Examples of AV connections are shown on pages 26 and 27.

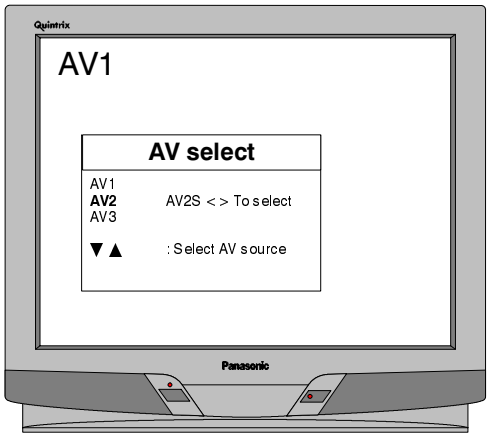
1

Press **'TV** / **AV'** to switch to Audio/Video mode



2

▼ ▲ To select the desired AV source AV1, AV2 or AV3.
◄ ► When AV2 is selected, to choose AV2 or AV2S.



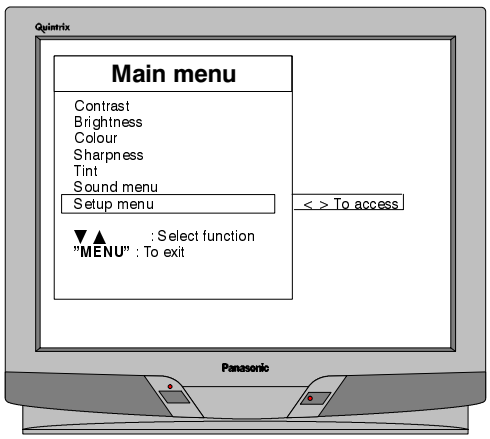
The menu will clear within a few seconds
Press **'TV** / **AV'** if you wish to return to TV mode

3

You may wish to make adjustments within the **Sound** and **Setup** menus.

MENU Press to open **Main** menu

▼ ▲ To move to **Setup** or **Sound** menus

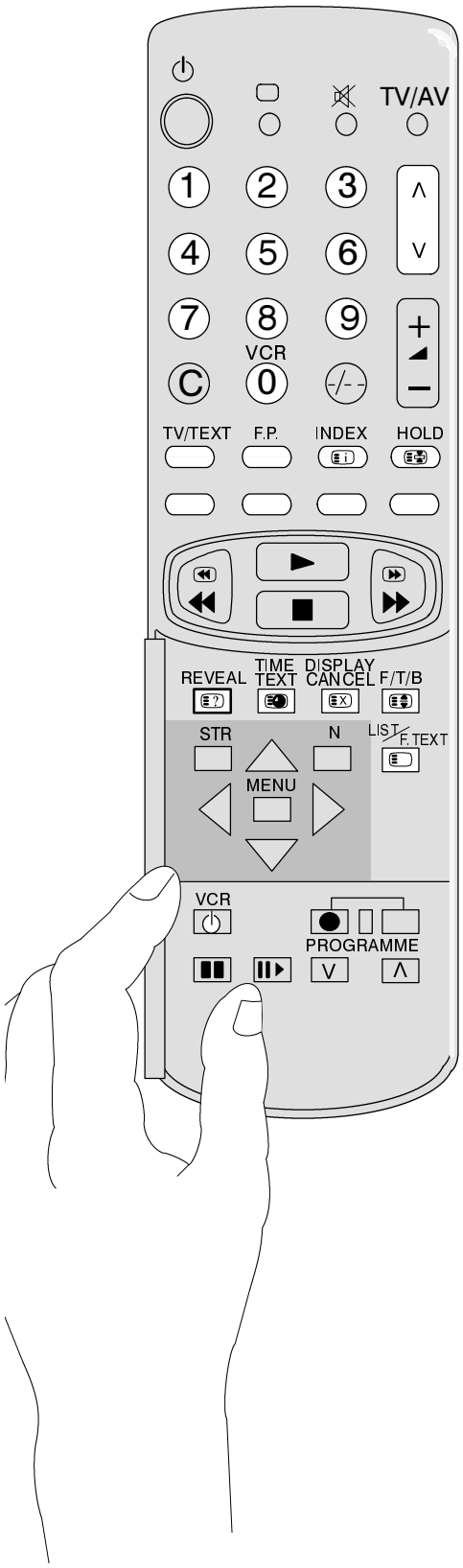


4

By accessing the **Sound** menu and adjusting the **Volume correction** you can set a different volume level for the AV inputs

TELETEXT OPERATION

Teletext features may vary depending on the Broadcasting Companies and are only available if the channel selected is transmitting Teletext. This TV set is capable of receiving German TOP Teletext transmissions, it will automatically switch to them if a German broadcast is being received, for example, from Satellite channels.
Pressing the **'MENU'** key whilst in Teletext operation will allow the Contrast setting to be adjusted.



TV/TEXT

TV / TEXT
Press the **TV/TEXT** key.
The screen will display the Teletext page.
Press again when you wish to return to TV mode.

Page Selection
The Teletext pages can be selected either by using the Up / Down keys or by entering the page number using the 0–9 keys.

LIST F.TEXT

List / FASTEXT
See following pages.

INDEX

Index
Returns to main index page if in FASTEXT mode.

F/T/B

F / T / B
Expands page for easier reading.

REVEAL

Reveal
Reveals hidden words and clues for quiz pages.

DISPLAY CANCEL

Display Cancel
See following pages.

F.P.

Favourite Page
Stores a favourite page in memory for instant recall.

HOLD

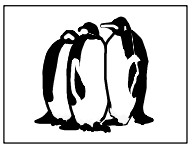
Hold
Press to hold the current page.

TIME TEXT

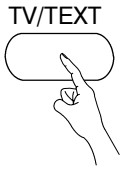
Time Text
See following pages.

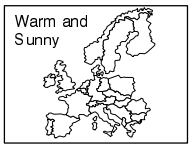
Red / Green / Yellow / Blue Keys
See following pages.

TELETEXT OPERATION



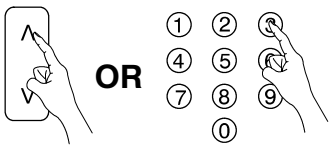
TV

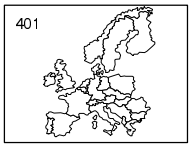




Teletext

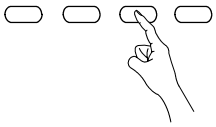
TV / Teletext mode

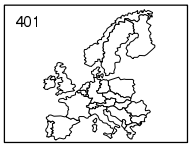




Page Selection

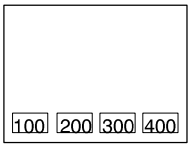
FASTEXT



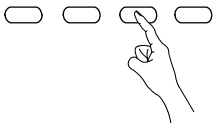


FASTEXT and LIST

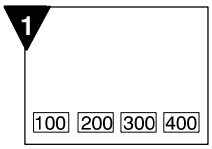
In **FASTEXT** mode the four differently coloured buttons Red / Green / Yellow / Blue are situated at the bottom of the display showing different subjects.

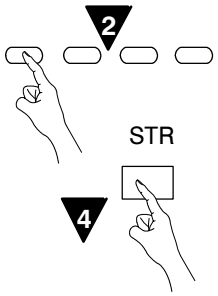


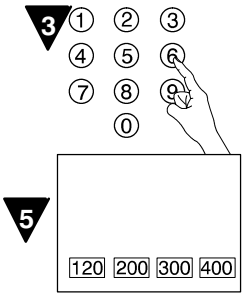
LIST



In **LIST** mode the four differently coloured buttons Red / Green / Yellow / Blue are situated at the bottom of the display showing different page numbers. Each of these page numbers can be altered and stored.



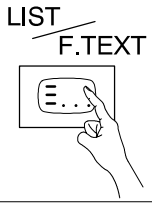


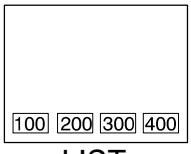


List Store

In LIST mode the four page numbers can be altered (for channel positions 1 – 25 only).
To do this, press one of the coloured keys and enter the new page number.
Press and hold **STR**, the page numbers will change colour.

FASTEXT



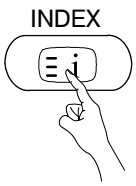


LIST

List / F.text

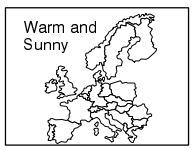
Press to change from FASTEXT mode to LIST mode and vice versa.

FASTEXT

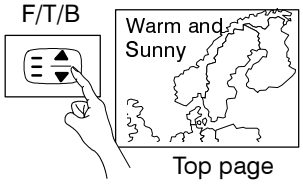


Index

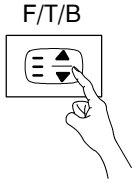
When in FASTEXT operation.
Press **INDEX** to return to the main index page.
Depending on the way information is transmitted, this may have to be pressed more than once to return to the main index page.

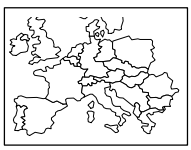


Full page



Top page

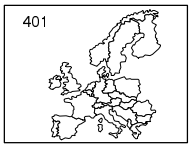


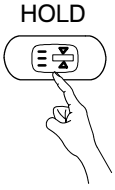


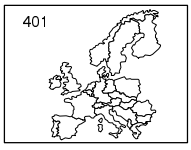
Bottom page

Full / Top / Bottom

Press to expand the TOP half of the page.
Press again to expand the BOTTOM half.
Press again to return to normal (FULL) size.

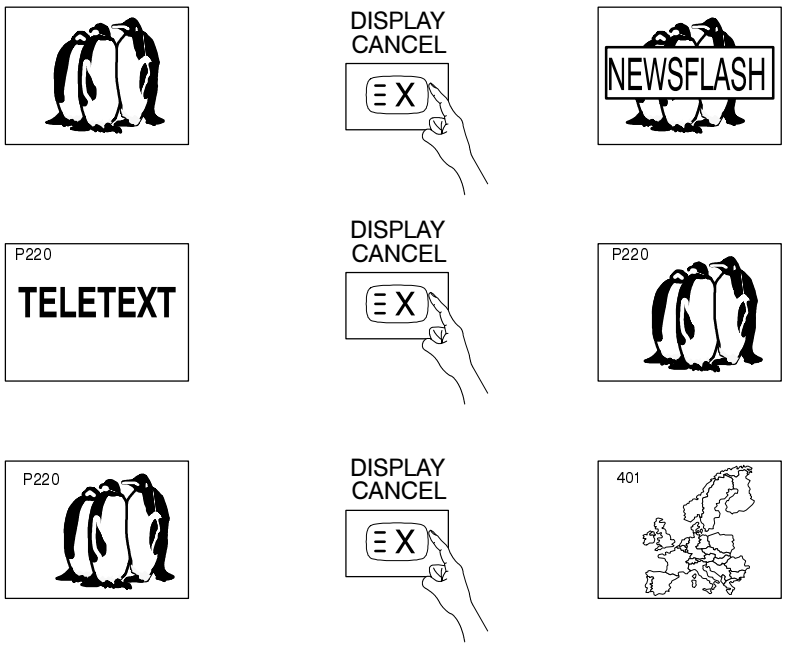






Hold

To hold the Teletext page when viewing multipage information.
Press again to return to automatic page update.



Display Cancel

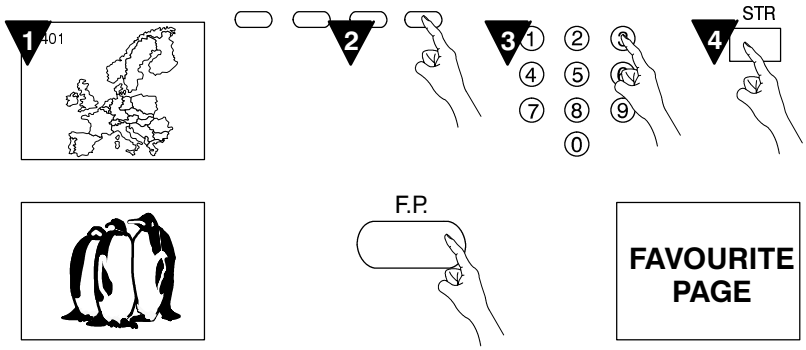
News Flash

When a news flash page has been selected, press **DISPLAY CANCEL** to view the TV picture, when an update is received, it will be displayed on screen.
Press **DISPLAY CANCEL** to remove updated news.
Press **TV** / **TEXT** to return to normal TV.

Press **DISPLAY CANCEL** to view the TV picture whilst searching for a Teletext page.
When found, the screen will display the page number at the top left.
Press **DISPLAY CANCEL** to view the page.
Press **TV** / **TEXT** to return to normal TV.

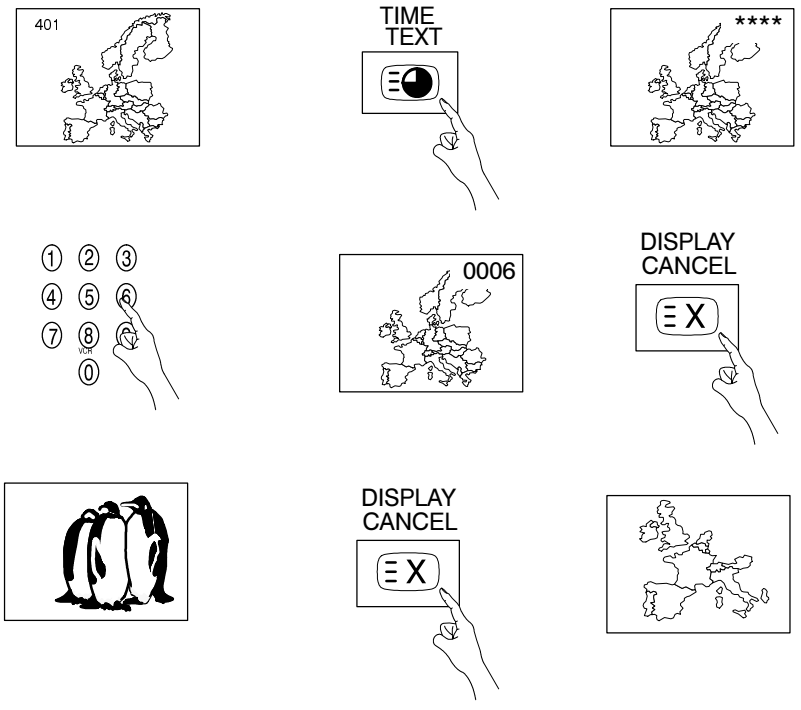
Update

Press **DISPLAY CANCEL** to see the update of information on certain pages.
When an update is received, the page number will be displayed at the top left of the screen.
Press **DISPLAY CANCEL** to view the page.
Press **TV** / **TEXT** to return to normal TV.



Favourite Page (F.P.)

Stores a favourite page in memory for instant recall. To store such a page, the TV must be in LIST mode, and the programme position must be from 1 – 25. Press the **BLUE** key, select the page number, then press **STR**. The page number is now stored.
Press **F.P.** to recall this page.
Note: Depending on the transmission sequence, when the F.P. key is pressed, the contents of the favourite page may take some time to appear. Only the page number is stored, not it's contents.



Sub Coded Page Access

When teletext information exceeds more than one page, it may take some time for the automatic changing of the sub pages to reach the sub page you require. It is possible to enter your required sub page and continue watching the normal programme until the correct sub page is found.
Select the required page number using keys 0 – 9.
Press **TIME TEXT**, **** will be displayed (top right of the screen).
Enter desired sub page number before the **** disappears.
To select page 6 enter 0, 0, 0 and 6.
If in LIST mode, a 'T' will appear in the current box at the bottom.
Press **DISPLAY CANCEL** to view a normal TV programme.
When the page is available, press **DISPLAY CANCEL** to view the page.
To clear the page perform one of the following :

- Select a new page number.
- Press **TV**/**TEXT** to return to normal TV operation.

VCR and SATELLITE RECEIVER INSTALLATION

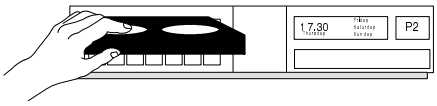
Your new TV is supplied with programme position '0' set to receive an RF signal from a VCR.

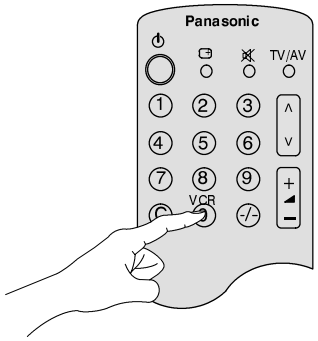
However, if for some reason the VCR is tuned to a different RF channel then you will not receive any picture or sound from the VCR on programme position '0' of the TV. It will be necessary to either adjust the RF channel of the VCR or to adjust the tuning of the TV's programme position '0' or both until the RF output channel of the VCR is received.

It is intended that this advice is used in conjunction with the instruction books for your ancillary equipment.

To connect a VHS VCR use the AV1 socket. To connect an S–Video VCR use the AV2 socket.

TO TUNE YOUR VCR TO THE TV

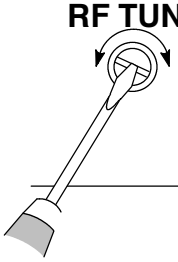




Insert recorded tape and select playback

Set TV to programme position '0' VCR

RF TUNING



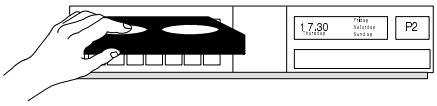
rear of VCR

Adjust tuning

Operation completed

See below for installation of VCR and Satellite Receiver

TO TUNE YOUR TV TO THE VCR

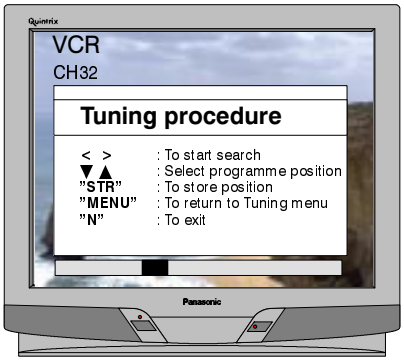


Access the Manual tuning menu as detailed on page 14.

▼ ▲ To select programme position '0'

◀ ▶ To start search for VCR playback

Programme position and current channel are displayed top left of screen



STR

To store position

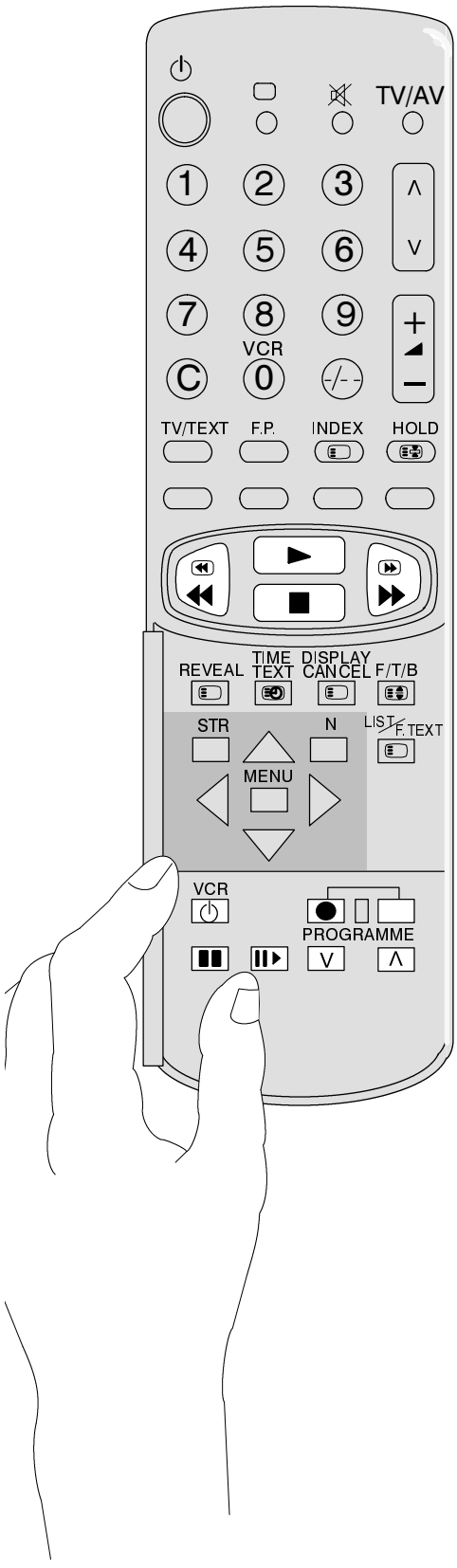
N

To return to viewing screen

If you are going to use a Satellite Receiver and a VCR **it is important**, to avoid tuning problems, that they are both tuned to output their signals on differing channels. For example, if your VCR is tuned to output channel 32, your Satellite Receiver could be set to output channel 34. Refer to your instruction books for precise tuning information.

VCR CONTROL

The Remote Control is capable of operating some functions of selected **Panasonic VCR**s, please consult your dealer for details. Some VCRs have different functions, so to ensure compatibility, please refer to the VCR's instruction book.



Standby

Press to switch the VCR to standby mode. Press again to switch back on.

Play

Press to playback the tape.

Stop

Press to stop the tape.

Fast Forward / **Cue**

Press to fast forward the tape. In Play mode, press to view the picture rapidly forward.

Rewind / **Review**

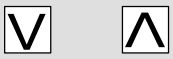
Press to rewind the tape. In Play mode, press to view the picture in reverse rapidly.

Pause / **Still**

Press in playback mode, the picture will pause.

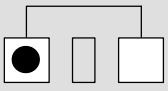
Still Advance

While in PAUSE / STILL mode, press to advance the picture one frame at a time.



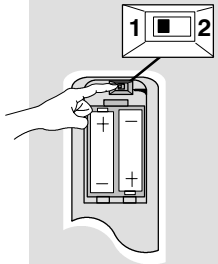
Programme Up / **Down**

Press to increase or decrease the VCR programme position by one.



Record

Press these together to record.

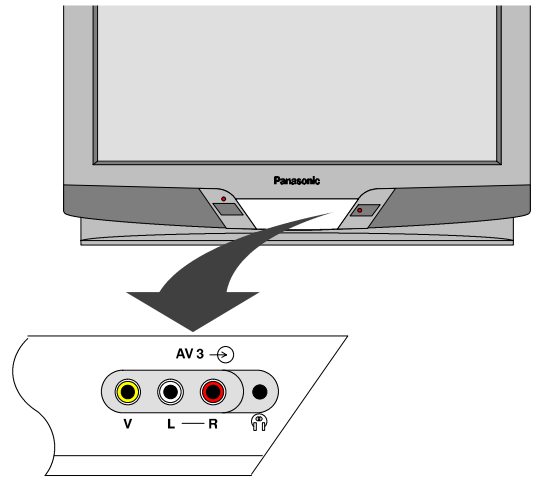


Operating Switch

If any difficulty is encountered when using this remote control with Panasonic videorecorders please check the operation of the videorecorder with the operating switch set at position one and again with the switch set at position two.

AUDIO / VIDEO (AV) CONNECTIONS

Front AV3 RCA Audio/Video and Headphone Sockets



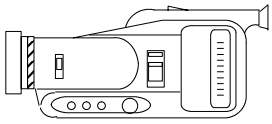
Video input to **V** socket

Audio input to **L / R** sockets

RCA Video Cable

2 x RCA Audio Cables

CAMCORDER



Output from **Headphone** socket

3.5mm Stereo Plug

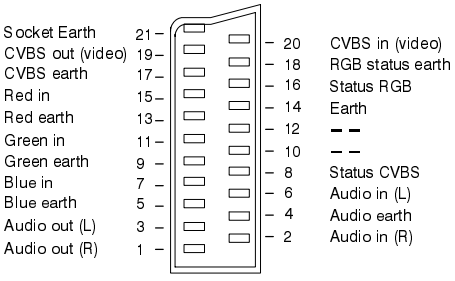
STEREO HEADPHONES with 3.5mm Plug

Note :

Ancillary equipment and cables shown are not supplied with this TV set.

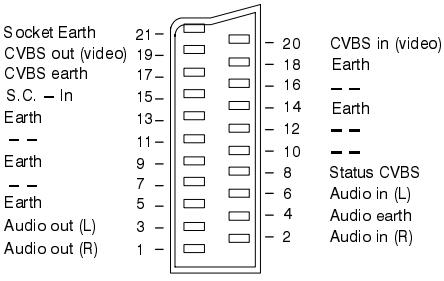
SCART Terminal Information

AV1 21 pin SCART terminal



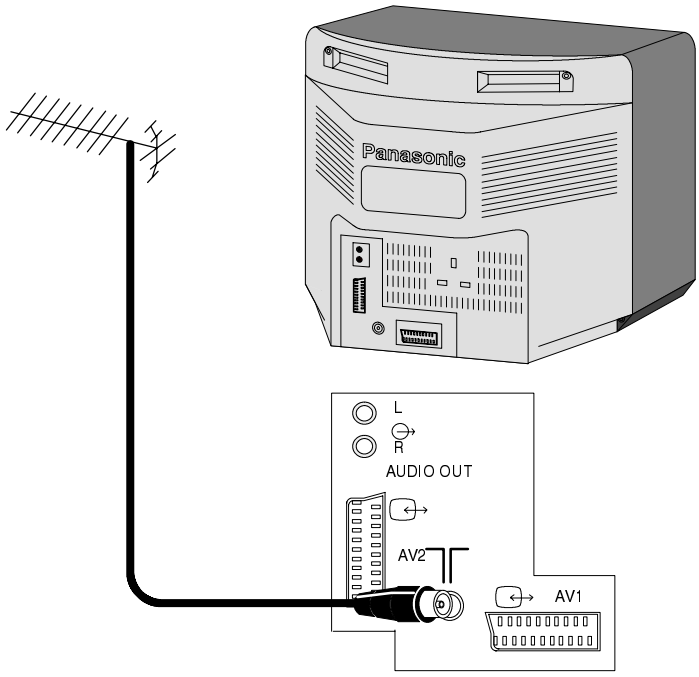
Suitable inputs for AV1 include RGB (Red/Green/Blue).

AV2 21 pin SCART terminal

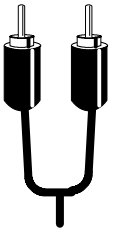


Pins 15 and 20 are dependent on AV2 S–VIDEO / VIDEO switching.

Rear AV1 / AV2 (S) 21 Pin SCART and RCA Audio Out Terminals

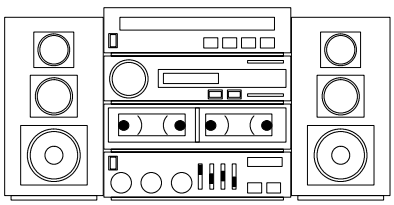


Output from
L–R AUDIO OUT
Sockets

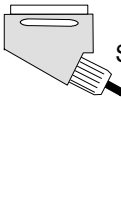


2 x RCA
Audio
Cables

HI–FI SYSTEM

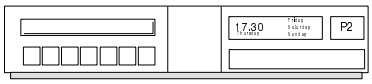


Input/Output from
AV–2 SCART
Socket

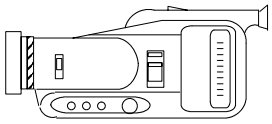


SCART Cable

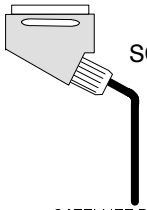
SECOND VCR OR S–VIDEO VCR



S–VIDEO CAMCORDER



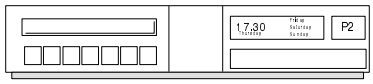
Input/Output from
AV–1 SCART
Socket



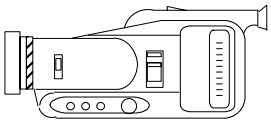
SCART Cable

SATELLITE RECEIVER

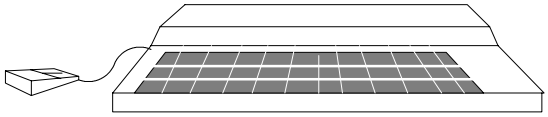
VCR



CAMCORDER

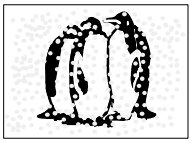
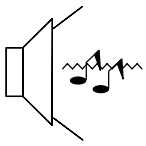
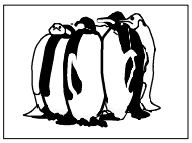
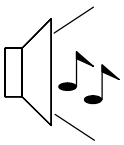
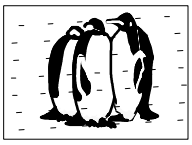
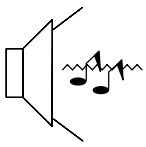
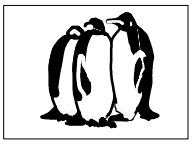
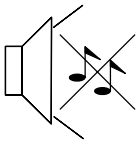
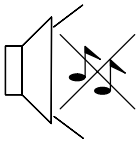
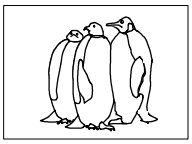
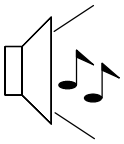
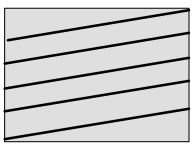
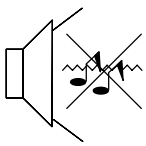
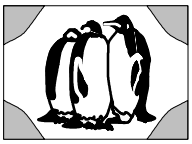
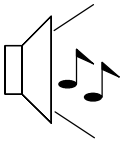


COMPUTER (RGB)



Notes:
Ancillary equipment and cables shown are not supplied with this TV set.
Do not connect a computer with TTL output (5V) to this set.
Additional information can be found under **AV Select** .

TROUBLESHOOTING

Symptoms		Checks
Picture	**Sound**	
 Snowy Picture	 Noisy Sound	Aerial location, direction or connection
 Multiple Images	 Normal Sound	Aerial location, direction or connection
 Interference	 Noisy Sound	Electrical appliances Cars / Motorcycles Fluorescent lights Switch on Noise–R in Setup menu to reduce picture noise Switch NICAM to Mono to improve sound.
 Normal Picture	 No Sound	Volume level Sound mute switched on
No Picture	 No Sound	TV set to AV mode Not plugged into A.C. outlet Not switched on Picture / Sound controls set at minimum levels Check if in standby mode
 No Colour	 Normal Sound	Colour controls set at minimum levels
 Poor or Distorted Picture	 Weak or No Sound	Retune Channel(s)
 Coloured Patches	 Normal Sound	Magnetic Interference from unshielded equipment Receiver moved while switched ON, switch TV off for 30 minutes.

■ Service

Before requesting service, please refer to the trouble–shooting guide on previous page to determine the symptoms. To obtain service please contact your local Panasonic dealer quoting the model number and serial number (both are located at the rear of the TV).

■ TV Games / Home Computers

Extended use of TV games or home computers with any television set can cause a permanent 'shadow' on the screen. This type of irreversible picture tube damage, can be limited by observing the following points:

- Reduce the brightness and contrast levels to a minimum viewing level.
- Do not operate the television set for a continuous period of time while using TV games or home computers.
- This type of picture tube damage, is not an operating defect, and as such is not covered by the Panasonic warranty.

■ Last Position Memory

Certain functions have a last position memory, i.e. the setting at the time of switch–off will be the setting used when the receiver is switched on again:–

Programme	Tint (M.NTSC / NTSC only)
AV Position	Contrast
Volume	Sharpness
NICAM On/Off	Aspect
Bass	Standby
Treble	Artificial Intelligence (AI)
Colour	Brightness
Status	Balance
Music/speech mode	Ambience

Volume correction (in AV mode only)

■ Sleep Feature

If the set is not switched off when the TV station stops transmitting, it will automatically go to standby mode after 30 minutes. This function will not operate when the TV is in AV mode.

SPECIFICATIONS

Model Number		TX–28MD3	TX–25MD3	TX–21MD3
Power Source		220 – 240V 50Hz A.C.		
Power Consumption		94W	92W	75W
Standby Power Consumption		1W		
Picture Tube FST		66cm visible diagonal	59cm visible diagonal	51cm visible diagonal
Audio Output		15W x 2 (MPO)		
Dimensions	H W D	576 mm 666 mm 472 mm	535 mm 601 mm 440 mm	481 mm 525 mm 477 mm
Weight (Kg)		31	26	22
Receiving Systems / Band name		**PAL I** (UHF E21–69), **PAL 525/60** Playback NTSC tape from PAL Video recorders (VCR) **M.NTSC** Playback from M.NTSC Video recorders (VCR) **NTSC (AV input only)** Playback from NTSC Videorecorders (VCR)		
Aerial – rear		UHF		
Headphones – Front		3,5mm		
AV – Rear		**AV1** – 21 pin terminal – Audio / Video in / out, RGB in. **AV2** – 21 pin terminal – Audio / Video in / out, S–Video in. 2 x RCA Audio Monitor Out		
AV – Front		**AV3** – 2 x RCA Audio in, 1 x RCA Video in		

- Specifications are subject to change without notice. Weight and dimensions shown are approximate.

NOTES

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